

REMARKS

By this Amendment, claims 1 and 7-9 are revised and claim 6 is canceled to place this application in immediate condition for allowance. Currently, claims 1-5 and 7-11 are before the Examiner for consideration on their merits.

In review, claim 6 has been incorporated into claim 1 and the dependency in claims 7-9 has been corrected in light of the cancellation of claim 6.

In light of the incorporation of claim 6 into claim 1, the rejection based solely on Charles or Takahashi and the admitted prior art is not moot. The only rejections to be addressed are based on Charles or Takahashi and the admitted prior art when relying on the teachings of United States Patent No. 6,715,317 to Bräuer et al.

Applicant submits that the prior art applied against claim 1 as amended fails to establish a *prima facie* case of obviousness and each rejection should be withdrawn. The traverse of the rejections is outlined below under the heading of the applied prior art.

CHARLES, ADMITTED PRIOR ART, and BRÄUER

The rejection can be summarized as follows:

FACTS

1) Except for the steam treatment of claim 1 (prior to the current revision to this claim), the remaining steps of the claim are admitted to be conventional steps.

2) Charles teaches either etching glass or treating the glass in a steam atmosphere for the purpose of increasing the strength of the glass, col. 1, lines 19-43, and col. 21, lines 29-64, respectively.

3) Charles does not teach an apparatus for the steam treatment.

4) Bräuer teaches a glass fiber drawing apparatus that employs gas nozzles 5 that are fed by a gas line 6. A cooling gas 17 emerges from the nozzles 5. The purpose of the cooling gas is to control the cross sectional form of the glass in the deformation area where the gas is applied, see col. 3, lines 19-26.

REJECTION

A) The Examiner concludes that it would be obvious to use the steam treatment of Charles in combination with the admittedly known steps of the prior art.

B) The Examiner further concludes that it would be obvious to use the nozzle arrangement of Bräuer for the steam treatment of Charles.

REASONING TO SUPPORT THE REJECTION

The Examiner alleges that one of skill in the art would find it obvious to employ the nozzles of Bräuer in “order to minimize oval deformation in the fiber.”

ARGUMENT

A first argument against the rejection is that the Examiner is drawing a conclusion of obviousness without the proper reasoning.

In the rejection, the Examiner oversimplifies the issue of obviousness by observing that just because Bräuer discloses a glass forming apparatus that employs nozzles for a particular purpose, this is sufficient to use nozzles jetting steam against the glass body of Charles so as to produce the desired steam atmosphere.

The problem with this approach is that it fails to take into account whether there is a legitimate reason for modifying Charles in the manner alleged in the

rejection. The mere fact that Bräuer employs gas nozzles to control the shape in the deformation area of a glass fiber making apparatus is not determinative of the issue of obviousness in this application.

In Charles, the soda lime glass body is subjected to an atmosphere containing 80-100% saturated steam for a period of 10-20 minutes whereby a corrosion product layer is formed on the surface of the body. The glass body is strengthened as a result of the formation of this layer, see col. 2, lines 45-50.

In complete contrast to Charles, the invention applies pressurized steam by jetting the steam against the glass body from a nozzle at a particular step in the drawing process to move dirt or dust on the glass body by action of the jetted stream. The aim of Charles and the invention are obviously completely different.

The rejection is flawed when considering the divergent teachings of Bräuer and Charles. As noted above, the Examiner alleges that it would be obvious to apply the steam treatment of Charles using the nozzles of Bräuer. This assertion makes absolutely no sense. Charles is concerned with treating a body of glass by placing the glass body in a steam atmosphere to form the strengthening corrosion product layer. In contrast, Bräuer directs a cooling gas 17 against plastically deformable glass in a deformation zone. This deformation zone, which is specifically defined in col. 2, lines 20-29, is a zone wherein the glass is in such a state that its shape can be controlled by cooling or heating.

What the Examiner is alleging is that since Bräuer uses nozzles for cooling of the glass and control of its shape in this deformation zone, this is a reason to use the same nozzles to jet steam against the solid body of glass employed by Charles.

Charles describes no deformation zone whatsoever. Again, Charles is merely treating the glass body in a steam atmosphere for the purpose of creating the aforementioned corrosion product layer.

Since Charles and Bräuer are not in the least related, it is improper to combine the two references to support the contention of obviousness based merely on the fact that Bräuer uses nozzles in a glass drawing process. The citation of the control of the oval deformation as a reason for the modifying of Charles is improper since oval deformation is not even a variable in Charles. Charles is dealing with the treatment of a solid glass body, not an apparatus or method for making glass fiber wherein the shape of the glass is controlled by cooling gas nozzles as is the case in Bräuer.

For the reasons given above, the rejection based on the modification of Charles is improper as lacking the necessary reasoning required under 35 U.S.C. § 103(a).

TAKAHASHI, ADMITTED PRIOR ART, and BRÄUER

The rejection based on Takahashi can be summarized as follows:

FACTS

1) Except for the steam treatment of claim 1 (prior to its current revision), the remaining steps of the claim are admitted to be conventional steps.

2) Takahashi teaches removing dust on the surface of an optical fiber by eliminating static electricity, see the Abstract. To accomplish this, the fiber is heated in a nitrogen gas containing water particles in concentrations of at least 100 ppm to up to 10000 ppm for at least 10 hours at a temperature of 300-800 °C, see claim 1 thereof.

3) Takahashi does not teach an apparatus for the steam treatment.

4) Bräuer teaches a glass fiber drawing apparatus that employs gas nozzles 5 that are fed by a gas line 6. A cooling gas 17 emerges from the nozzles 5. The purpose of the cooling gas is to control the cross sectional form of the glass in the deformation area where the gas is applied, see col. 3, lines 19-26.

REJECTION

A) The Examiner concludes that it would be obvious to use the steam treatment of Takahashi in combination with the admittedly known steps of the prior art.

B) The Examiner further concludes that it would be obvious to use the nozzle arrangement of Bräuer for the steam treatment of Takahashi.

REASONING TO SUPPORT THE REJECTION

The Examiner alleges that one of skill in the art would find it obvious to employ the nozzles of Bräuer in “order to minimize oval deformation in the fiber.”

ARGUMENT

The argument against the rejection based on Takahashi, the admitted prior art, and Bräuer is basically the same as that made above for the modification of Charles using Bräuer.

Takahashi teaches a method of drawing an optical fiber, wherein an optical fiber base material is treated at a high temperature in the presence of nitrogen and steam. The result of this is explained in paragraph [0016], wherein the dust containing chromium and zirconium is prevented from adhering to the optical fiber base material. In the rejection, the Examiner interprets Takahashi as teaching dust

removal. However, paragraph [0016] teaches preventing the dust present in the furnace from adhering to the glass. This is entirely different from the aim of the invention and to clean the surface of the rod using jetted steam.

The rejection is flawed when considering the divergent teachings of Bräuer and Takahashi. As noted above, the Examiner alleges that it would be obvious to apply the steam treatment of Takahashi using the nozzles of Bräuer. This assertion makes absolutely no sense. Takahashi is concerned with treating a body of glass by subjecting it to a heat treatment in a nitrogen-steam atmosphere for the purpose of removing static electricity on the glass surface so that dust in the furnace does not adhere to the glass. In contrast, Bräuer directs a cooling gas 17 against plastically deformable glass in a deformation zone. This deformation zone, which is specifically defined in col. 2, lines 20-29, is a zone wherein the glass is in such a state that its shape can be controlled by cooling or heating.

What the Examiner is alleging is that since Bräuer uses nozzles for cooling of the glass and control of its shape in this deformation zone, this is a reason to use the same nozzles to jet steam against the solid body of glass employed by Takahashi. Takahashi describes no deformation zone whatsoever. Again, Takahashi is merely treating the glass body in a steam atmosphere for the purpose of removing static electricity to prevent dust adherence.

Since Takahashi and Bräuer are not in the least related, it is improper to combine the two references to support the contention of obviousness based merely on the fact that Bräuer uses nozzles in a glass drawing process. The citation of the control of the oval deformation as a reason for the modifying of Takahashi is improper

since oval deformation is not even a variable in Takahashi. Takahashi is dealing with the treatment of a solid glass body, not an apparatus or method for making glass fiber wherein the shape of the glass is controlled by cooling gas nozzles as is the case in Bräuer.

For the reasons given above, the rejection based on the modification of Takahashi is improper as lacking the necessary reasoning required under 35 U.S.C. § 103(a).

DEPENDENT CLAIMS

Since claim 1 has been demonstrated to be patentably distinct from the applied prior art, its dependent claims are all patentable over this prior art.

SUMMARY

In summary, Applicant submits that a *prima facie* case of obviousness is not established against claim 1 in its amended form by the relied-upon prior art and that the rejection of claims 1-5 and 7-11 should be withdrawn.

Accordingly, the Examiner is requested to consider the arguments made above, and pass all pending claims onto issuance.

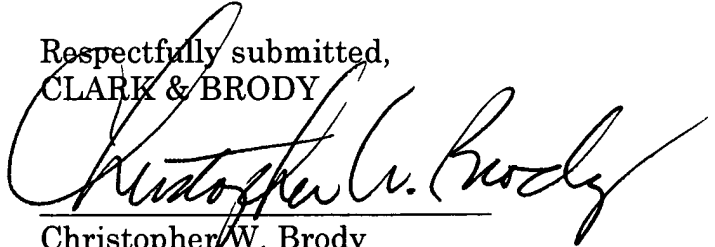
If the Examiner believes that an interview would be helpful in expediting the allowance of this application, the Examiner is requested to telephone the undersigned at 202-835-1753.

The above constitutes a complete response to all issues raised in the Office Action dated January 28, 2008.

Again, reconsideration and allowance of this application is respectfully requested.

A petition for a two month extension of time is made. A check in the amount of \$460.00 is attached, however, please charge any fee deficiencies or credit any overpayment to Deposit Account No. 50-1088.

Respectfully submitted,
CLARK & BRODY

A handwritten signature in cursive script, appearing to read "Christopher W. Brody", written over a horizontal line.

Christopher W. Brody
Registration No. 33,613

Customer No. 22902
1090 Vermont Ave. NW Suite 250
Washington, DC 20005
Telephone: 202-835-1111
Facsimile: 202-835-1755
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